

## **INTRODUCTION:**

In accordance with the foregoing, claims 1-2 and 9-14 have been amended. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1-4 and 6-14 are pending and under consideration.

## **ENTRY OF AMENDMENT UNDER 37 C.F.R. § 1.116:**

Applicant requests entry of this Rule 116 Response because the amendments of claims 1-2 and 9-14 should not entail any further search by the Examiner since no new features are being added or no new issues are being raised; and the amendments do not significantly alter the scope of the claims and place the application at least into a better form for purposes of appeal. No new features or new issues are being raised.

The Manual of Patent Examining Procedures sets forth in Section 714.12 that "any amendment that would place the case either in condition for allowance or in better form for appeal may be entered." Moreover, Section 714.13 sets forth that "the Proposed Amendment should be given sufficient consideration to determine whether the claims are in condition for allowance and/or whether the issues on appeal are simplified." The Manual of Patent Examining Procedures further articulates that the reason for any non-entry should be explained expressly in the Advisory Action.

## **REJECTION UNDER 35 U.S.C. § 112:**

In the Office Action, at page 3, claims 10, 12, 13, and 14 were rejected under 35 U.S.C. § 112, second paragraph, for the reasons set forth therein.

Independent claims 1 and 9-14 and dependent claim 2 have been amended to improve clarity and antecedent support. It is respectfully requested that the rejection to the claims be withdrawn.

## **REJECTION UNDER 35 U.S.C. § 102:**

In the Office Action, at page 4, claims 1 and 9-14 were rejected under 35 U.S.C. § 102 in view of U.S. Patent No. 5,675,665 to Lyon ("Lyon"). This rejection is traversed and reconsideration is requested.

Lyon provides that for each ideograph **containing two or more radicals 300**, the bounds evaluation unit 26 generates a bounds measurement for each radical 300, and

compares bounds measurement pairs 94 against bounds model pairs 104. See column 20, lines 60-64. It appears that once again the Examiner is confusing the feature amount of a recognition target with the feature amount of a model as shown in FIGS. 14-16. The cited reference fails to teach or suggest the claimed features of the independent claims reciting that the recognition target is not divided, specifically, “an extracting unit extracting the feature amount from a recognition target by a process in which the recognition target is not divided into units even if the recognition target comprises a plurality of units.” Accordingly, it is respectfully requested that the rejection to the claims be withdrawn.

**REJECTION UNDER 35 U.S.C. § 103:**

**In the Office Action, at page 6, claims 2 and 8 were rejected under 35 U.S.C. § 103 in view of Lyon. The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.**

Because claims 8-9 depend from independent claim 1, the claimed features of independent claim 1 must be shown in Lyon. In Lyon, the bounds model pair 104 shown in Fig. 16 corresponds to the feature amount of a model provided in advance, and is generated from the feature amount of “wood.” Thus, because the feature amount of “wood” is provided in advance, there is no need to divide the ideograph “forest.” However, if an image of an ideograph “forest” is inputted as a recognition target, the image to be recognized must be divided into units in order to generate the bounds measurement pair 94 shown in Fig. 15 that can be collated with the bounds model pair 104 shown in Fig. 16. Thus, the cited reference fails to teach or suggest, “an extracting unit extracting the feature amount from a recognition target by a process in which the recognition target is not required to be divided into units even if the recognition target comprises a plurality of units,” as recited in independent claim 1.

According to the Office Action, without providing any basis from a reference, it is conclusively asserted that “it would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate releasing the memory location when a collation of the feature amount of the word is complete, and storing a feature amount of the next word in that location because it is a well known procedure routinely implemented in the art.” However, the MPEP as well as recent case law further supports this requirement of any reliance of Official Notice be specific and detailed as to what is being relied upon and how.

Regarding Official Notice, on remand from the Supreme Court, the Federal Circuit in In re Zurko, 258 F.3d 1379, 59 USPQ2d 1693 (Fed. Cir. 2001), reversed the

decision of the Board of Patent Appeals and Interferences ("Board") to uphold a rejection under 35 USC §103 for lack of substantial evidence. Specifically, in Zurko and other recent decisions, the court criticized the USPTO's, both at the Board and Examiner level, reliance on "basic knowledge" or "common sense" to support an obviousness rejection, where there was no evidentiary support in the record for such a finding.

While "official notice" may be relied upon, as noted in MPEP §2144.03, these circumstances should be rare when an application is under final rejection or action under 37 CFR §1.113. Official Notice unsupported by documentary evidence should be only be taken by the Examiner where the facts asserted to be well known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known and only when such facts are of notorious character and serve only to "fill in the gaps" which might exist in the evidentiary showing made by the Examiner to support a particular ground of rejection. **Further, the applicant should be presented with the explicit basis on which the Examiner regards the matter as subject to official notice sufficient to allow the applicant a proper opportunity to challenge that assertion.**

It is improper to merely deem something obvious without any teaching/suggestion, or the taking of Judicial Notice. If the U.S. Patent and Trademark Office wishes to take Judicial Notice that the proposed structural and functional modification is notoriously well known, it is respectfully requested that supporting evidence be provided. **The Federal Circuit has cautioned that an Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.** In re Rouffet, 47 USPQ2d 1453, 1458 (Fed. Cir. 1998).

Thus, both the MPEP and recent case law specifically detail that whenever Official Notice is taken, which should be on very rare occasions, the Office Action must provide the explicit support for the reliance on Official Notice "to allow the applicant a proper opportunity to challenge that assertion." Such explicit support may be presented using a reference or an Affidavit signed by the Examiner of record.

The outstanding Office Action has provided no explicit support of what the purported well-known features encompass or how the determination of those features as being well known has been determined. Rather, the Office Action only cites Lyon, without pointing how the claimed features have been determined as being well known.

Only the present invention sets forth all the claimed features, as well as the motivation for combining the same. We suggest further arguing that the outstanding rejection would appear to have taken the teachings of the present invention such that a combination of "well known features" and Lyon, as set forth in the Office Action, would disclose the presently claimed

invention. See W.L. Gore & Assocs. Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

**In the Office Action, at page 7, claims 3, 4, and 6 were rejected under 35 U.S.C. § 103 in view of Lyon and Tsuruoka (Handwritten KANJI and HIRAGANA Character Recognition Using Weighted Direction Index Histogram Method). The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.**

Because claims 3, 4, and 6 depend from independent claim 1, the claimed features of independent claim 1 must be shown in Lyon and/or Tsuruoka. The arguments previously presented supporting the patentability of independent claim 1 in view of Lyon are incorporated herein. Tsuruoka generally describes an algorithm for a 2-letter state name segmentation to recognize the state name of the mail pieces. However, similarly to Lyon, nothing in Tsuruoka teaches or suggests, "an extracting unit extracting the feature amount from a recognition target by a process in which the recognition target is not required to be divided into units even if the recognition target comprises a plurality of units," as recited in independent claim 1. Rather, Tsuruoka provides a splitting point is located near the center of 0-projections, and it is effective especially for the image in which the widths of each letter are different such as "IN," "HI," "WI," and "MI." Thus, even assuming arguendo, that Lyon and Tsuruoka were combined, a combination thereof would fail to teach or suggest all the claimed features recited in independent claim 1 and related dependent claims.

Furthermore, as commonly understood, the Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art..."[the Examiner] can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." In re Fritch, 23 USPQ 2d 1780, 1783 (Fed. Cir. 1992). In addition, the mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. Id. at 1783-84. However, the Examiner has provided absolutely no motivation to combined the cited references. Rather, conclusive statements are made such as "it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Lyon invention according to the teaching of Tsuruoka et al to extract a direction code histogram series obtained from a conversion result as the feature amount of the recognition target because

it will increase the accuracy and improve the confidence level of the character recognition system."

"Rejection of patent application for obviousness under 35 USC §103 must be based on evidence comprehended by language of that section, and search for and analysis of prior art includes evidence relevant to finding of whether there is teaching, motivation, or suggestion to select and combine references relied on as evidence of obviousness; factual inquiry whether to combine references must be thorough and searching, based on objective evidence of record." In re Lee 61 USPQ2d 1430 (CA FC 2002)

Thus, as pointed out in In re Lee, the record must support motivation, i.e., there must be something in the record pointing out where the recited motivation can be found. In addition, there must be some discussion on how that purported motivation or suggestion is even relevant to the reference being modified. Only the present invention sets forth all the claimed features, as well as the motivation for combining the same. The outstanding rejection would appear to have taken this teaching of the present invention and applied the same to generate a combination of Lyon and Tsuruoka, as set forth in the Office Action, to disclose the presently claimed invention. It is respectfully requested that the rejection to the claims be withdrawn.

**In item 11, on page 9 of the Action, the Examiner asserts detailed reasons for rejecting claim 7 under 35 U.S.C. § 103(a) as being anticipated by Lyon (U.S. Patent No. 5,675,665) and in view of U.S. Patent No. 5,151,951 to Ueda et al. The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.**

Because claim 7 depends from independent claim 1, the claimed features of independent claim 1 must be shown in Lyon and/or Ueda. Ueda generally describes compensating for a shift in the feature pattern when calculating the degree of resemblance by a degree of resemblance calculator 108 to obtain the highest degree of resemblance. See column 22, lines 16-67. Because a standard pattern is generally obtained from a character image which will be the standard for that character (the character "V" in this example), the character shapes are normalized as shown in FIG. 13 (b) so that the standard pattern is completely contained in the single character area. However, because the feature pattern is generated based on a character image input by a scanner 101, it frequently occurs that the character shape does not perfectly fit the single character area, as shown in FIG. 13 (a), due to distortions introduced by copying an original text or from differences in handwriting. Thus, as shown in FIG. 15, a degree

of resemblance is calculated.

However, similarly to Lyon, Ueda fails to teach or suggest, "an extracting unit extracting the feature amount from a recognition target by a process in which the recognition target is not required to be divided into units even if the recognition target comprises a plurality of units," as recited in independent claim 1. Rather, in Ueda, when calculating the degree of resemblance, the degree of resemblance is calculated for the quantified features of the subregion 121' of the standard pattern and the quantified features extracted from each of the related regions 121a, 121b, 121c of the subregion 121 of the feature pattern. See column 22, lines 16-67. Ueda requires that the recognition target be divided into subregions. The system in Ueda is only capable of absorbing pattern variations occurring within areas at which meshed regions overlap with each other. In contrast, dependent claim 7 recites, "collating unit performs a non-linear matching of the feature amount of the word and the feature amount of the recognition target such that a shift of the recognition target in a connection direction of characters is **absorbed**, and calculates a degree of similarity between the feature amount of the word and the feature amount of the recognition target." Emphasis added.

Thus, even assuming arguendo, that Lyon and Ueda were combined, a combination thereof would fail to teach or suggest all the claimed features recited in independent claim 1 and related dependent claims.

The proposed modification of incorporating the description provided in Ueda into Lyon changes the principle of operation of Lyon. In particular, Ueda does not teach or suggest modifying a trading card to include a data storage unit and a housing unit "containing and protecting the data storage unit, wherein the housing unit comprises a serial number identifying the trading card," as recited in independent claim 3. Rather, Ueda finds it limiting to use trading cards and accordingly describes a system where rather than trading cards; floppy disks are traded and used in combination with a computer system.

Even assuming, arguendo, that the description of Ueda is included into Lyon, the proposed combination would render Lyon unsatisfactory for its intended purpose as the Office Action has interpreted Lyon to reject the claims. Specifically, the Office Action has been referring to portions of Lyon as not requiring the recognition target to be divided. However, Ueda indicates that "the subdivider divides the image data for the single character area into subregions. The features calculator calculates quantified features in each subregion based on a degree of resemblance between a template and image data in the subregions." See abstract.

Thus, if the description of Ueda would be combined with Lyon, the description provided in Lyon would fail to perform for its intended purpose.

Further, the motivation provided in the Office Action to combine the references is "to improve the accuracy of the recognition system by providing highest degree of resemblance between the target and reference pattern." In support of this statement, the Office Action refers to column 22, lines 16-25 of Ueda. The referred portion of Ueda refers to compensating for a shift in a feature pattern when calculating a degree of resemblance by a degree of resemblance calculator 108 to obtain a highest degree calculator. However, nothing in Lyon indicates a need to compensate for the shift in the feature pattern. Rather, Lyon provides that bounds measurement pair against a given bounds model pair produces a set of error values. The error values are used in conjunction with an error covariance matrix that has also been trained with handwritten training words to determine a pairwise cost value associated with the hypothesized character identifier pair. A word recognition unit incorporates individual character cost values and each pairwise cost value in a conventional minimum-cost path search method to determine the identity of the handwritten word. Nothing in Lyon suggests or supports the purported combination of the references set forth in the Office Action. Accordingly, it is respectfully requested that the rejection to the claims be withdrawn.

**CONCLUSION:**

accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. And further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited. At a minimum, this Amendment should be entered at least for purposes of Appeal as it either clarifies and/or narrows the issues for consideration by the Board.


If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited and possibly concluded by the Examiner contacting the undersigned attorney for a telephone interview to discuss any such remaining issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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